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IN THE CLAIMS

Please cancel claims 3, 6, 10 and 19, amend claims 1, 7, 11, 14, 19 and 21 and add new claims 22-23 as follows:

1. (CURRENTLY AMENDED) A method of making a diploid transgenic oviparous teleost fish comprising:

(a) introducing an exogenous nucleic acid sequence into the genome of a cultured embryonic fibroblast cell derived from a progenitor teleost fish;

(b) transplanting the nucleus of the cell of step (a) into an enucleated egg derived from a parental fish of the same genus as the progenitor fish, wherein fish embryos in the genus develop externally; and

(c) placing the egg generated by step (b) into conditions suitable for embryonic fish development so that a diploid transgenic fish is made.

2. (ORIGINAL) The method of claim 1, wherein the transgenic fish has at least one exogenous gene product expressed therein that is encoded by the exogenous nucleic acid sequence.

3. (CANCELLED).

4. (ORIGINAL) The method of claim 1, wherein the exogenous nucleic acid comprises a promoter element or an enhancer element.

5. (ORIGINAL) The method of claim 1, wherein the transgenic fish is fertile.

6. (CANCELLED).

7. (CURRENTLY AMENDED) The method of claim [[6]] 1, wherein the cultured embryonic fibroblast cell derived from the progenitor teleost fish has been maintained in cell culture for an amount of time sufficient for at least 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, 120, 130, 140,

150, 160, 170 or 180 cell divisions prior to transplanting the nucleus of the embryonic fibroblast into an enucleated egg.

8. (ORIGINAL) The method of claim 1, wherein the cultured cell derived from the progenitor fish has been frozen prior to step (a) or step (b).

9. (ORIGINAL) The method of claim 1, wherein the progenitor fish are of the species *Danio rerio*, *Oryzias latipes*, *Misgurnus anguillicaudatus*, *Salmo irideus*, *Salmo salar*, *Oreochromis nilotica*, *Parasilurus asotus*, *Mylopharyngodon piceus*, *Ctenopharyngodon idellus*, *Hypophthalmichthys molitrix*, *Aristichthys nobilis*, *Cyprinus Carpio* or *Carassius auratus*.

10. (CANCELLED).

11. (CURRENTLY AMENDED) A method of making a progeny oviparous teleost fish comprising:

(a) obtaining [[a]] an embryonic fibroblast cell from a progenitor fish,  
(b) maintaining the cell in in vitro culture,  
(c) transplanting the nucleus of the cell of step (b) into an enucleated egg from a parental fish of the same genus as the progenitor fish, wherein fish embryos in the genus develop externally;  
and

(d) placing the egg generated by step (c) into conditions suitable for embryonic fish development so that the progeny fish is made, wherein the progeny fish is fertile.

12. (ORIGINAL) The method of claim 11, wherein the progeny fish is diploid.

13. (ORIGINAL) The method of claim 11, wherein the progeny fish is a transgenic fish.

14. (CURRENTLY AMENDED) The method of claim 13, wherein the transgenic fish expresses at least one exogenous gene product encoded by [[the]] a transgene.

15. (ORIGINAL) The method of claim 13, wherein the transgenic fish has at least one endogenous gene product that is inactivated by the transgene.

16. (ORIGINAL) The method of claim 13, wherein the transgenic fish comprises an exogenously introduced promoter element or enhancer element.

17. (ORIGINAL) The method of claim 11, wherein the cell is maintained in in vitro culture an amount of time sufficient to:

- (i) introduce an exogenous nucleic acid sequence into the genome of the cell; and
- (ii) identify the cell containing the an exogenous nucleic acid sequence within a plurality of cells comprising the cell having the exogenous nucleic acid sequence and a cell lacking the exogenous nucleic acid sequence.

18. (ORIGINAL) The method of claim 11, wherein the cell is maintained in culture an amount of time sufficient for at least 40, 50, 60, 70, 80, 90, 100, 110, 120, 130, 140, 150, 160, 170 or 180 cell divisions.

19. (CANCELLED)

20. (ORIGINAL) The method of claim 11, wherein the progenitor fish are of the species *Danio rerio*, *Oryzias latipes*, *Misgurnus anguillicaudatus*, *Salmo irdeus*, *Salmo salar*, *Oreochromis nilotica*, *Parasilurus asotus*, *Mylopharyngodon poceus*, *Ctenopharyngodon idellus*, *Hypophthalmichthys molitrix*, *Aristichthys nobilis*, *Cyprinus Carpio* or *Carassius auratus*.

21. (CURRENTLY AMENDED) ~~A progeny~~ The transgenic fish made according to the method of claim [[11]] 15.

22. (NEW) A method of making a diploid transgenic teleost fish comprising:

- (a) introducing an exogenous nucleic acid sequence into the genome of a cultured embryonic fibroblast cell derived from a progenitor teleost fish;
- (b) transplanting the nucleus of the cell of step (a) into an enucleated egg from a parental fish of the same species as the progenitor fish; and
- (c) placing the egg generated by step (b) into conditions suitable for embryonic fish development so that a diploid transgenic fish is made.

23. (NEW) A method of making a progeny teleost fish comprising:
- (a) obtaining an embryonic cell from a progenitor fish;
  - (b) maintaining the cell in in vitro culture;
  - (c) transplanting the nucleus of the cell of step (b) into an enucleated egg from a parental fish of the same species as the progenitor fish; and
  - (d) placing the egg generated by step (c) into conditions suitable for embryonic fish development so that the progeny fish is made, wherein the progeny fish is fertile.